

# FORMS OF THE MATERIALS SHARED BETWEEN A TEACHER AND A PUPIL

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## ABSTRACT

Methods of using ICT is hereby amended. We merge from the original model of work on one computer to the model of cloud services and mobile touch screen devices use. Way of searching for and delivering of information between a pupil and a teacher is closely related with this matter as well. This work detects common and preferred procedures of pupils during their communication and work with information in connection with the school preparation. A significant shift towards using mobile touch screen devices instead of common desktop computers is clearly visible.

## KEYWORDS

Sharing, web 2.0, teaching, LMS, mobile

## 1. INTRODUCTION

Over a long period of time, a PC often shared by more teachers at the same time was understood as basic term for ICT. (Chan, 2010) That was sufficiently efficient tool connected to the computer network and to the Internet. It was specifically used for the teacher's preparation and to access to the school information system. A similar model was applied even with building computer classrooms for the pupils. There was a workplace for each pupil equipped with a classic PC, the pupil owned his own personal account within the school domain and his work was almost always linked with physical access to the school network.

Home preparation connected with use of ICT equipment was understood similarly. Work with a classic desktop computer regarding accepting information (email, saved online materials) same as regarding creation of the pupil outcomes (presentations, seminar works) was borne to mind.

This access is detectable within regular final reports of the Czech School Inspectorate and Ministry of Education, Youth and Sports while one of the main monitored parameters was the total number of computers at a school and their sharing ratio among pupils, teachers and administrative school staff. We always focus on the number of devices, not on their specific use. As an example we may mention the Report on State of ICT equipment of the Czech Schools in the year 2006 carried out by the Ministry of Education, Youth and Sports of the Czech Republic as a project outcome of the State Information Policy in Education. This report contains statistics from 97,66 % of the Czech schools, so we may consider it sufficiently predictive. This report includes statistics of the following features:

- number of computers and their location;
- way of Internet connection;
- actual and potential Internet connectivity;
- education level reached among school Principals;
- number of presentation technologies.

There is no information about the specific technology use found in the Report. There is just one sentence in the Czech School Inspectorate Report stated, i.e. that the teaching programmes are the most frequent form of ICT equipment use.

At present we may see a radical deflection from work with a specific device and its shift towards so called cloud environments. (Stein et al., 2013) Neither ownership nor the access to a specific device is important; the importance lies in Internet access and access to any ICT device. The term Web 2.0 is commonly used and

it changes the way we think of Internet, mostly a source of information into a space of sharing and cooperation. Difference between operation systems and devices wanes and it comes to the unified operation of tools via web interface. There is massive development of web applications enabling work via a web client on the web server.

From the teacher's point of view, there comes a moment of radical change of his work with ICT tools. Within the original model, a teacher is linked to one specific PC or to a school domain account and his work activity is then limited by the time he spends in the workplace. When considering work with Web 2.0 tools on the mobile device, his activity is limited by Internet access only. Thanks to web applications the teacher is able to communicate with pupils and parents, prepare teaching materials and share them immediately, by which a 24/7 teaching model is significantly supported. (Edrees, 2013)

From the pupil's point of view there is monitored a fundamental shift in accepting of information. There is a visible shift from use of desktop devices towards work with operation system mobile devices – ie. so called smartphones and tablets. (Lai et al., 2007)

## 2. FORMS OF USING ICT

There were two questionnaire surveys carried out. The sample included 51 pupils in age 13 to 14. The questionnaire was in electronic form pupils filled them in ICT lesson. The goal was to detect preferences of teachers and pupils in the way of searching for information via ICT and in the use of ICT for mutual sharing of materials. They have been questioned what ICT devices are commonly used. The first survey was designed for pupils. The questions were designed for pupils of the 8<sup>th</sup> grade of the primary school (26) and students of the 2<sup>nd</sup> year of the secondary grammar school (25). The survey was focused on way of searching for information and on type of preferred way of delivery of school materials between a teacher and a pupil.

8<sup>th</sup> grade primary school pupils (26) same as 2<sup>nd</sup> year grammar school students (25) were addressed. The goal of the questionnaire was to find out about their way of searching for information and preferred way of gaining materials from the teacher. Obtained results are stated in Table no. 1.

Table 1. Ways of using ICT by pupils

| <i>If I come along an unknown term, I search for it</i>    |    |    |
|--|----|----|
|  | PS | GS |
| In a textbook  | 2  | 7  |
| In notes taken during the lessons                          | 1  | 6  |
| In materials I obtained from the teacher                   | 4  | 12 |
| On Internet  | 24 | 25 |
| By searching for information on social networks            | 15 | 14 |
| <b>I would like to obtain materials from the teacher:</b>  |    |    |
| Printed  | 20 | 7  |
| Via email  | 18 | 19 |
| By sharing (Dropbox, Google etc.)                          | 4  | 8  |
| I shall download them from the teacher's or school website | 20 | 18 |
| I shall download them from LMS                             | 0  | 3  |
| Via social networks  | 12 | 15 |

As we can see from Table 1, majority of pupils use electronic resources during their studies. However, it is interesting that the primary school pupils prefer obtaining materials in printed version. Nevertheless, they do not work with such materials any further. In my view, significant differences exist between the way of thinking of teachers and pupils. While at the primary school the pupils are led by the teacher to work with

printed material, the pupils themselves are already familiar with completely different ways of obtaining information. Although the pupils are made to write down their notes into their exercise books, they do not work with such notes during the preparation. There is a slightly different situation with the grammar school students. Although Internet clearly predominates in searching for information, the students probably start to realize the importance of the obtained information both in their notes and in the teacher's materials and so they work with them more often.

As for the both groups of the students, the materials are obtained mostly via email or downloaded from the Internet. Primary schools prefer printed material the most. LMS and sharing via cloud services have very low preferences. However, it highly depends on achieved experience of pupils and ways of the teacher's work. As for LMS, there is cooperation between a teacher and pupils necessary. As regards common cloud services, delivery of reference to the pupils as well as mutual sharing of the files with a group of pupils is absolutely essential here. These are the obstacles which prevent from the wider use of these two ways of the delivery of materials.

The second questionnaire was focused on common use of mobile touch screen and desktop devices. Their ownership was examined additionally.

Table 2. Types of ICT tools used by pupils

| <b><i>As for the email communication out of the school I use (more than 50 %)</i></b>                      |    |    |
|--|----|----|
|  | PS | GS |
| Smart phone or tablet  | 23 | 17 |
| Notebook or desktop PC   | 3  | 8  |
| <b><i>As for communication on social network I use (more than 50%)</i></b>                                 |    |    |
| Smart phone or tablet  | 25 | 23 |
| Notebook or desktop PC   | 1  | 2  |
| <b><i>As regards searching for information during preparation for the school I use (more than 50%)</i></b> |    |    |
| Smart phone or tablet  | 15 | 10 |
| Notebook or desktop PC   | 10 | 13 |

Table 3. ICT ownership

| <b><i>Ownership of ICT devices</i></b> |    |    |
|--|----|----|
|  | PS | GS |
| Smart phone                            | 24 | 24 |
| Tablet                                 | 12 | 17 |
| My own notebook                        | 12 | 18 |
| Shared notebook or PC                  | 13 | 7  |

Regarding communication, we can see from Table No. 2 that a mobile touch screen device becomes a prevailing tool. Ratio of use is approximately half in case of searching for information. Younger pupils prefer use of mobile touch screen devices which is closely connected with the fact that the children are already used to these devices.

Table 3 indicates ownership of the mobile device to be a common practice. Mobile touch screen device is the only tool which is used by one of primary school pupil. Older pupils use desktop devices at a higher rate.

### 3. CONCLUSION

It is clear there are significant changes in way of searching for and transfer of information within school. Mainly teachers have to take note of this fact and they have to adapt their procedures when communicating with pupils. At present the majority of teachers deliver materials to pupils via email or via printed materials. Interest of the pupils to download materials anytime from the Internet prevails. Web publishing of materials becomes very simple via Web 2.0 tools so it is important for teachers to get familiar with such a procedure. Unlike the older tools no longer need any special technical skills.

Mobile touch screen device even more intervened in the common way of electronic communication. The overwhelming majority of pupils use mobile device for their communication and such devices contribute to a large share of further work with information. This trend becomes helpful to widen a model of teaching which is usually referred to as 24/7. Its application depends highly on immediate accessibility of ICT devices.

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